

Application No. 09/609,269
Amendment "A" dated June 11, 2004
Reply to Office Action mailed March 11, 2004

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) In a gateway computer system coupled between at least one computer system and at least one remote computer system, a method of the gateway computer system dynamically converting a data structure from a first format as received at the gateway computer system from an originating computer system into a second data format compatible with a remote computer system, the method comprising:

an act of identifying a sequence of format conversion modules that, when executed in sequence, converts the data structure from the first data format into the second data format;

an act of converting the data structure from the first data format into an intermediate data format using ~~the~~ a first format conversion module in the sequence of data conversion modules; and

an act of converting the data structure from the intermediate data format into the second data format using at least ~~the two~~ second format conversion modules in the sequence of data conversion modules, each of the second format conversion modules converting the data structure into different formats.

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2. (Original) A method in accordance with Claim 1, further comprising the following:

an act of identifying the first data format as received from the originating computer system; and

an act of identifying the second data format compatible with the remote computer system.

3. (Original) A method in accordance with Claim 2, wherein the act of identifying the first data format comprises the following:

an act of reading a content type field associated with the data structure.

4. (Original) A method in accordance with Claim 2, wherein the act of identifying the second data format comprises the following:

an act of reading a destination address field associated with the data structure;

an act of querying a database for a data format recognized by the remote computer system that is represented by the destination address within the destination address field; and

an act of determining that the resulting data format returned from database is the second data format.

5. (Original) A method in accordance with Claim 1, wherein the remote computer system comprises a wireless device.

6. (Original) A method in accordance with Claim 5, wherein the originating computer system comprises a server computer system.

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7. (Original) A method in accordance with Claim 1, wherein the originating computer system comprises a wireless device.

8. (Original) A method in accordance with Claim 7, wherein the remote computer system comprises a server computer system.

9. (Original) A method in accordance with Claim 1, wherein the originating and remote computer system both comprise wireless devices.

10. (Original) A method in accordance with Claim 1, wherein the originating and remote computer systems both comprise server computer systems.

11. (Original) A method in accordance with Claim 1, further comprising the following:

an act of receiving the data structure using a first protocol module that is compatible with receiving data from the originating computer system; and

an act of determining a second protocol module that is compatible with delivering data to the remote computer system; and

an act of transmitting the converted data structure to the remote computer system using the second protocol module.

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12. (Original) A method in accordance with Claim 1, further comprising the following:

an act of receiving the data structure using a first network driver module that is compatible with receiving data from the originating computer system; and

an act of determining a second network driver module that is compatible with delivering data to the remote computer system; and

an act of transmitting the converted data structure to the remote computer system using the second network driver module.

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13. (Currently Amended) A computer program product for use in a gateway computer system coupled between ~~at least one originating computer system and at least one remote~~ computer system, the computer program product for implementing a method of dynamically converting a data structure from a first format as received at the gateway computer system from an originating computer system into a second data format compatible with a remote computer system, the computer program product comprising a computer-readable medium having computer-executable instructions for performing the following:

an act of identifying a sequence of format conversion modules that, when executed in sequence, converts the data structure from the first data format into the second data format;

an act of converting the data structure from the first data format into an intermediate data format using ~~the~~ a first format conversion module in the sequence of format conversion modules; and

an act of converting the data structure from the intermediate data format into the second data format using at least ~~the two~~ second format conversion modules in the sequence of format conversion modules, each of the second format conversion modules converting the data structure into different formats.

14. (Original) A computer-program product in accordance with Claim 13, wherein the computer-readable medium comprises a physical storage medium.

15. (Original) A computer-program produce in accordance with Claim 13, wherein the computer-readable medium further comprises computer-executable instructions for performing the following:

an act of identifying the first data format as received from the originating computer system; and

an act of identifying the second data format compatible with the remote computer system.

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16. (Original) A computer-program product in accordance with Claim 15, wherein the ~~computer-executable instructions for performing the act of identifying the first data format~~ comprise computer-executable instructions for performing the following:

an act of reading a content type field associated with the data structure.

17. (Original) A computer-program product in accordance with Claim 15, wherein the computer-executable instructions for performing the act of identifying the second data format comprise computer-executable instructions for performing the following:

an act of reading a destination address field associated with the data structure;

an act of querying a database for a data format recognized by the remote computer system that is represented by the destination address within the destination address field;
and

an act of determining that the resulting data format returned from database is the second data format.

18. (Original) A computer-program product in accordance with Claim 13, further comprising computer-executable instructions for performing the following:

an act of receiving the data structure using a first protocol module that is compatible with receiving data from the originating computer system; and

an act of determining a second protocol module that is compatible with delivering data to the remote computer system; and

an act of transmitting the converted data structure to the remote computer system using the second protocol module.

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19. (Original) A computer-program product in accordance with Claim 13, further comprising computer-executable instructions for performing the following:

an act of receiving the data structure using a first network driver module that is compatible with receiving data from the originating computer system; and

an act of determining a second network driver module that is compatible with delivering data to the remote computer system; and

an act of transmitting the converted data structure to the remote computer system using the second network driver module.

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20. (Currently Amended) In a gateway computer system coupled between at least one originating computer system and at least one remote computer system, a method of the gateway computer system dynamically converting a data structure in a first format as received at the gateway computer system from an originating computer system into a second data format compatible with a remote computer system, the method comprising the following:

an act of identifying a plurality of sequences of format conversion modules that each, when executed in sequence, converts the data structure from the first data format into the second data format; and

a step for converting the data structure from the first data format into the second data format using one of the plurality of the sequences of format conversion modules.

21. (Currently Amended) A method in accordance with Claim 20, wherein the step for converting the data structure from the first data format into the second data format comprises the following:

an act of converting the data structure from the first data format into an intermediate data format using the first format conversion module in the one of the plurality of sequences of data conversion modules; and

an act of converting the data structure from the intermediate data format into the second data format using at least the second format conversion module in the one of the plurality of sequences of data conversion modules.

22. (Original) A method in accordance with Claim 20, further comprising the following:

an act of identifying the first data format as received from the originating computer system; and

an act of identifying the second data format compatible with the remote computer system.

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23. (Original) A method in accordance with Claim 22, wherein the act of identifying the first data format comprises the following:

an act of reading a content type field associated with the data structure.

24. (Original) A method in accordance with Claim 22, wherein the act of identifying the second data format comprises the following:

an act of reading a destination address field associated with the data structure;

an act of querying a database for a data format recognized by the remote computer system that is represented by the destination address within the destination address field;
and

an act of determining that the resulting data format returned from database is the second data format.

25. (Original) A method in accordance with Claim 22, wherein the remote computer system comprises a wireless device.

26. (Original) A method in accordance with Claim 25, wherein the originating computer system comprises a server computer system.

27. (Original) A method in accordance with Claim 20, wherein the originating computer system comprises a wireless device.

28. (Original) A method in accordance with Claim 27, wherein the remote computer system comprises a server computer system.

29. (Original) A method in accordance with Claim 20, wherein the originating and remote computer system both comprise wireless devices.

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30. (Original) A method in accordance with Claim 20, wherein the originating and remote computer systems both comprise server computer systems.

31. (Original) A method in accordance with Claim 20, further comprising the following:

an act of receiving the data structure using a first protocol module that is compatible with receiving data from the originating computer system; and

an act of determining a second protocol module that is compatible with delivering data to the remote computer system; and

an act of transmitting the converted data structure to the remote computer system using the second protocol module.

32. (Original) A method in accordance with Claim 20, further comprising the following:

an act of receiving the data structure using a first network driver module that is compatible with receiving data from the originating computer system; and

an act of determining a second network driver module that is compatible with delivering data to the remote computer system; and

an act of transmitting the converted data structure to the remote computer system using the second network driver module.

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33. (Currently Amended) A computer program product for use a gateway computer system coupled between at least one originating computer system and at least one remote computer system, the computer program product for implementing a method of dynamically converting a data structure in a first format as received from an originating computer system into a second data format compatible with a remote computer system, the computer program product comprising a computer-readable medium having computer-executable instructions for performing the following:

an act of identifying a plurality of sequences of format conversion modules that each, when executed in sequence, converts the data structure from the first data format into the second data format; and

a step for converting the data structure from the first data format into the second data format using one of the plurality of sequences of format conversion modules.

34. (Original) A computer-program product in accordance with Claim 33, wherein the computer-readable medium comprises a physical storage medium.

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35. (Currently Amended) A gateway computer system configured to be coupled ~~between at least one originating computer system and at least one remote computer system~~, the gateway computer system configured to receive a data structure having a first data format from an originating computer system and transmit the data structure in a second format to a remote computer system, the gateway computer system comprising:

a plurality of format conversion modules including:

a plurality of first format conversion modules configured to convert data structures having a first data format into ~~data structures having an intermediate data formats~~; and

~~at least a~~ plurality of second format conversion modules configured to convert data structures having the intermediate data formats into the second data format; and

a module for identifying ~~the different sequences of first and second format conversion modules and the least the second format conversion module as being that are~~ a subset of the plurality of format conversion modules and that, when executed in sequence, result in the data structure being converted from the first data format into the second data format.

36. (Original) The gateway computer system in accordance with Claim 35, wherein the originating computer system comprises a server computer system.

37. (Original) The gateway computer system in accordance with Claim 36, wherein the remote computer system comprises a wireless device.

38. (Original) The gateway computer system in accordance with Claim 35, wherein the originating computer system comprises a wireless device.

39. (Original) The gateway computer system in accordance with Claim 38, wherein the remote computer system comprises a server computer system.

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40. (Original) The gateway computer system in accordance with Claim 35, wherein
~~the originating and remote computer systems both comprise a wireless device.~~

41. (Original) The gateway computer system in accordance with Claim 35, wherein
the originating and remote computer systems both comprise a server computer system.
